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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,376	08/26/2003	Joan Rosell	AERX-076CIP	4605
24353 7590 06/13/2008 BOZICEVIC, FIELD & FRANCIS LLP 1900 UNIVERSITY AVENUE SUITE 200 EAST PALO ALTO, CA 94303				
EXAMINER				
KIM, CHRISTOPHER S				
ART UNIT		PAPER NUMBER		
3752				
MAIL DATE		DELIVERY MODE		
06/13/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/649,376

Applicant(s)

ROSELL ET AL.

Examiner

Christopher S. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-26 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 26 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The response filed March 4, 2008 is acknowledged.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

3. Applicant elected, with traverse, Species B, Figure 3 in the reply filed on May 3, 2007.

Information Disclosure Statement

4. The information disclosure statement filed January 29, 2004 fails to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered.

Use of a copy of PTO Form 892 from application no. 09/591,365 by the applicant fails to comply with 37 CFR 1.98(a)(1).

Drawings

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "first channel opening" and "second channel opening" recited in claim 12; the "diameter of the second channel opening is less than two times the diameter of the exit orifice of the pressure chamber" recited in claim 13; the "diameter of the second channel opening is less than one time the diameter of the exit orifice of the pressure chamber" recited in claim 14 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

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application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 13 and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 13 recites "the diameter of the second channel opening is less than two times the diameter of the exit orifice of the pressure chamber" and claim 14 recites "the diameter of the second channel opening is less than one time the diameter of the exit orifice of the pressure chamber".

Channel 13 which encircles the area of the first fluid stream exiting 16 appears to have a diameter which is equal to the exit orifice (at exit point 7 or P) of the pressure chamber 2.

8. Claims 9-11, 13-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 13-15 define the size of the second channel opening relative to the size of the exit orifice of the pressure chamber. It appears that the second channel opening is formed by the exit opening at the upstream end and the exit orifice. It is uncertain how a dimension of the second channel opening is different from the exit orifice which forms part of the second channel opening.

Claims 7, 8, 16 and 17 define end result characteristics which are dependent on the structural characteristics of the device and the operating parameters. The claims fail to define any further method steps to achieve the end result. Therefore, either (1) method steps to accomplish the end result or structural features that produce the end result are missing from the claim, i.e., essential steps or structure to accomplish the desired results as specified by the claims, or (2) the method steps explicitly identified in parent claim 1 are enough to inherently produce the end result.

Claim Rejections - 35 USC § 102

9. Claims 1-17, 24-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Jennings (3,463,404).

Jennings discloses a method comprising:

forcing a first fluid 16 through a feeding supply means 4 and out an exit opening (downstream orifice of conduit 4 or orifice of body 1 upstream of orifice 11);

filling a pressure chamber 3 with a second fluid (gas);

forcing the second fluid (gas) toward and into the first fluid stream circumference (figures 2, 3) in a manner which reduces the circumference of the first fluid stream and breaks the stream into particles having a diameter less than the diameter of the exit opening (downstream orifice of conduit 4 or orifice of body 1 upstream of orifice 11);

allowing the second fluid (gas) to exert force on the first fluid and force particles of the first fluid out of an exit orifice 15 of the pressure chamber 3;

the pressure chamber 3 comprises a channel 3 with a first channel opening (connection opening to conduit 5) and a second channel opening 11.

Regarding claims 9-11, where the exit opening is defined by the orifice of body 1 upstream of orifice 11, the ratio of the exit opening to the exit orifice is 1.

Regarding claims 7, 8, 16 and 17, the claims are rejected under this statutory basis on the premise that the method steps defined in claim 1 would inherently produce the end result. See the rejection of claims 7, 8, 16 and 17 under 35 U.S.C. 112, second paragraph above for clarification.

10. Claims 1-17, 21-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Ganan-Calvo et al. (WO 97/43048).

Ganan-Calvo discloses a method comprising:

forcing a first fluid through a feeding supply means 1 and out an exit opening 5;

filling a pressure chamber 3 with a second fluid (gas);

forcing the second fluid (gas) toward and into the first fluid stream circumference (figure 1) in a manner which reduces the circumference of the first fluid stream and breaks the stream into particles having a diameter less than the diameter of the exit opening 5;

allowing the second fluid (gas) to exert force on the first fluid and force particles of the first fluid out of an exit orifice 6 of the pressure chamber 3;

the pressure chamber 3 comprises a channel 3 with a first channel opening (connection opening to 4) and a second channel opening (between 5 and 6).

Regarding claims 7, 8, 16 and 17, the claims are rejected under this statutory basis on the premise that the method steps defined in claim 1 would inherently produce the end result. See the rejection of claims 7, 8, 16 and 17 under 35 U.S.C. 112, second paragraph above for clarification.

Claim Rejections - 35 USC § 103

11. Claims 7, 8, 18, 21, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jennings (3,463,404).

Jennings does not particularly disclose causing the first fluid or second fluid to move at a speed equal to or greater than the speed of sound in air. Jennings does disclose that the device is used for rocket motors. Rockets are well known to exceed the speed of sound. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have caused the first fluid and/or second fluid to move

at a speed equal to or greater than the speed of sound in the device of Jennings to increase speed of the rocket.

12. Claims 18, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganan-Calvo et al. (WO 97/43048).

Regarding claim 18, Ganan-Calvo discloses the limitations of the claimed invention with the exception of the liquid stream and gas being equal to or greater than the speed of sound in air. Ganan-Calvo recognizes, in column 5, lines 25-44, the need for higher flow rates. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided liquid stream and gas speed equal to or greater than the speed of sound, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claims 19 and 20, Ganan-Calvo et al. discloses, in the abstract, that the is applicable to any mechanism involving homogenous atomization of liquids. Inhaled pharmaceutically active drugs are well known in the art. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have used the method of Ganan-Calvo for inhaled pharmaceutically active drugs for homogenous atomization of liquids.

Response to Arguments

13. Applicant's arguments filed March 4, 2008 have been fully considered but they are not persuasive.

Regarding the indefiniteness of claims 7, 8, 16 and 17, applicant argues that applicant is claiming a method and that method includes specific steps of moving fluids in a specific manner in order to obtain a specific result. Although claims 7, 8, 16 and 17 recite specific results, they provide no specific steps.

Applicant argues that Jennings does not disclose a pressure chamber that is in direct, uninterrupted fluid connection with the exit opening of the feeding supply means because of porous member 9. Claim 1 requires "direct, uninterrupted fluid connection" that is provided by Jennings' pores in porous member 9.

Applicant argues that Ganan-Calvo does not break the first fluid stream by forcing the first fluid stream into the second fluid. Ganan-Calvo forces a liquid into gas and produces a spray at 7. Ganan-Calvo produces the result as the claims recite. The claims fail to provide specific steps that are not disclosed by Ganan-Calvo.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (571) 272-4905. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571) 272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher S. Kim/
Primary Examiner, Art Unit 3752

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CK